Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 through 37 (Cancelled).

38. (Currently amended) A method of analyzing a sample by ~~performing~~ immunohistochemistry, in situ hybridization, fluorescent in situ hybridization, a Southern hybridization, a Northern hybridization, a Western annealing, or an ELISA, wherein said method comprises:

providing ~~a~~ said sample;

preparing the sample for analysis comprising the steps of fixation, processing, imbedding, deparaffinization, and dehydration, wherein ultrasound at a frequency of at least 100 kHz is applied during each step except imbedding;

analyzing the prepared ~~performing a process on said~~ sample using a process selected from the group consisting of:

immunohistochemistry,

in situ hybridization,

fluorescent in situ hybridization,

a Southern hybridization,

a Northern hybridization,

a Western annealing, and

an ELISA; and

applying ultrasound at a frequency of at least 100 kHz to said sample during said analysis ~~while said process is being performed~~.

39. (Previously presented) The method of claim 38 wherein said immunohistochemistry, in situ hybridization, or fluorescent in situ hybridization is performed on a solid phase, said solid phase being selected from the group consisting of a tissue section, tissue microarray, and a chip.

40. (Original) The method of claim 38 wherein said Southern hybridization, Northern hybridization, Western annealing or ELISA is performed on a membrane, a microarray or a DNA chip.

41. (Previously presented) The method of claim 38 wherein said method is performed on a solid phase, a microarray, a membrane or a DNA chip and wherein said solid phase, microarray, membrane or DNA chip receives ultrasound power of at least 0.01 W/cm^2.

42. (Previously presented) The method of claim 38 wherein a power of said ultrasound is in a range of 0.01-100 W/cm^2.

43. (Previously presented) The method of claim 38 wherein said frequency is in a range of 100 kHz to 50 MHZ.

44. (Previously presented) The method of claim 38 wherein two or more ultrasound transducers are used to produce said ultrasound.

45. (Previously presented) The method of claim 38 wherein said method is performed on a solid phase, membrane, microarray or DNA chip and wherein one or more ultrasound transducers are used to produce an ultrasound field that allows at least a portion of said solid phase, membrane, microarray or DNA chip to receive a uniform frequency and intensity of ultrasound.

46. (Original) The method of claim 38 wherein said ultrasound is produced by a transducer comprising one or more heads.

47. (Previously presented) The method of claim 46 wherein one or more of said heads are capable of emitting a frequency selected from the group consisting of a single frequency and a wideband frequency.

48. (Previously presented) The method of claim 38 wherein said method is performed on a sample, a tissue section, or a membrane.

49. (Original) The method of claim 46 wherein one head on a single transducer produces a frequency different from a frequency produced by a second head on said single transducer.

50. (Original) The method of claim 46 wherein one head on a single transducer produces an intensity different from an intensity produced by a second head on said single transducer.

51. (Original) The method of claim 44 wherein each of said transducers produces an ultrasound frequency different from an ultrasound frequency produced by at least one other transducer.

52. (Original) The method of claim 44 wherein each of said transducers produces an ultrasound intensity different from an ultrasound intensity produced by at least one other transducer.

53. (Previously presented) The method of claim 48 wherein a range of frequencies is applied to said sample, said tissue section, or said tissue.

54. (Currently amended) The method of claim 48 wherein said method is performed on a solid phase, membrane, microarray or DNA chip and wherein ~~said~~ a plurality of transducers are arranged around said solid phase, membrane, microarray or DNA chip in a two-dimensional arrangement.

55. (Currently amended) The method of claim 48 wherein said method is performed on a solid phase, membrane, microarray or DNA chip and wherein ~~said~~ a plurality of transducers are arranged around said solid phase, membrane, microarray or DNA chip in a three-dimensional arrangement.

56. (Previously presented) The method of claim 48 wherein said method is performed on a solid phase, membrane, microarray or DNA chip and wherein said solid phase, membrane, microarray or DNA chip is rotated.

57. (Currently amended) The method of claim 48 wherein said method is performed on a solid phase, membrane, microarray or DNA chip and wherein ~~said~~ a transducer revolves around said solid phase, membrane, microarray or DNA chip.

58. (Original) The method of claim 38 wherein said ultrasound is produced as a continuous signal.

59 and 60. (Cancelled)

61. (Original) The method of claim 38 wherein said ultrasound is produced in pulses.

62 and 63. (Cancelled)

64. (Previously presented) The method of claim 61 wherein said frequency varies in a range of 0.1-50 MHZ.

65. (Original) The method of claim 61 wherein said pulses vary in intensity.

66. (Previously presented) The method of claim 38 wherein said ultrasound is produced as a continuous signal.

67 (Cancelled)

68. (Previously presented) The method of claim 66 wherein said signal varies in intensity over time.

69. (Previously presented) The method of claim 38 wherein said method is performed on a solid phase, membrane, microarray or DNA chip wherein said solid phase, membrane, microarray or DNA chip receives ultrasound of a power in the range of 0.01-100 W/cm^2.

70 through 91 (Cancelled).